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09/761,493	01/16/2001	Christopher J. Spencer	D/A1003	5894

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EXAMINER
LEE, CHEUKFAN

ART UNIT	PAPER NUMBER
2622	6

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DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/761,493	SPENCER ET AL.	
	Examiner	Art Unit	
	Cheukfan Lee	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *5-9,11-15,18 and 19* is/are allowed.

6)☒ Claim(s) *1-4,10,16 and 17* is/are rejected.

7)☒ Claim(s) *20 and 21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 January 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Claims 1-21 are pending. Claims 20 and 21 are newly added. Claims 1, 5, 11, 16, 18, and 19 are independent.

2. Applicant's arguments filed June 4, 2004 have been fully considered but they are not persuasive. The rejection and response to Applicant's arguments follow.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawase et al. (U.S. Patent No. 5,194,725) in view of Fujimoto (U.S. Patent No. 6,166,832) and Barry et al. (U.S. Patent No. 5,517,332).

Regarding claim 1, Sawase et al. discloses an image sensor (100) (module) for a document scanner. The module (100) comprises a housing (101) having datum element (where the upper surface areas of the sensor board 103 near the left and right ends of the sensor board 103 come into contact with in Fig. 1), an image sensor array (105), an array bias element (102a) urging the image sensor board (103) and thus the sensor array (105) against the datum element. Sawase et al. further shows a transport mechanism for transporting document A (Fig. 1).

With respect to the claimed "first direction" and "second direction" different from the "first direction", the image sensor array (105) of Sawase et al. shown is orientated for receiving an image from a first direction, i.e., the vertical downward direction from the document A to the sensor array (105) in Fig. 1, and the bias element urges the sensor array (105) in a second direction opposite to the first direction.

Sawase et al. does not explicitly disclose two clam limitations, the housing being a molded housing and the transport mechanism being attached to the housing.

Fujimoto discloses an image sensor module (20) having a housing (case 21), which is molded integrally of resin (col. 3, lines 40-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a molded housing, as taught by Fujimoto, having the shape and structure of the housing (101) of Sawase et al. to provide a housing with strong support of the components within the sensor module.

The module of Sawase et al. in view of Fujimoto discussed above does not show the transport mechanism attached to the housing. Both references show a document being transported by a transport mechanism (Fig. 9 of Fujimoto) or an inherent transport mechanism.

Barry et al. discloses an image sensing module (192 in Fig. 4) having a housing and a transport mechanism attached to the housing (Fig. 4 and Fig. 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to attach the transport mechanism of Sawase et al. in view of

Fujimoto to the sensor module as taught by Barry et al. to provide a compact scanner or image module as suggested by Barry et al. (col. 1, lines 15-60).

Regarding claim 2, as discussed for claim 1 above with respect to Fujimoto, the molded housing or case (21 of Fujimoto) is molded integrally of resin. Thus, it is a unitary casing.

Regarding claim 3, depending on the orientation of module discussed for claim 2, an edge of the sensor board (103 of Sawase et al.) where the bias element (spring 102a) is urging is interpreted as the rearward edge of the sensor array (103), and the opposite edge thereof is the forward edge of the array (103). Thus, the spring (102a) abuts the rearward edge of the sensor array (103) to urge the forward edge of the sensor array 9103) against the datum element (where an upper surface area, according to Fig. 1, of the sensor board 103 near an end of the board 103 comes into with).

Regarding claim 4, the parts or ribs discussed for claim 3 where the upper surface areas of the sensor board (103) near the ends of the board (103) come into contact with are interpreted to be the datum ribs, and parts of the housing (parts 112 in Fig. 1 of Sawase et al.) are interpreted to be support ribs.

Method claim 16 is rejected as being corresponding to the apparatus claim 1. Please note that Sawase et al. shows in Fig. 2 a bottom cover (202) attached to the housing to enclose the imaging sensor array (where array 205 is).

For claim 17, Sawase et al. and Fujimoto both show a lens (106 in Sawase et al., 27 in Fujimoto) and a lamp (143 in Sawase et al., 25 in Fujimoto) attached to the housing of the module.

5. Claims 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sawase et al. (U.S. Patent No. 5,194,725) in view of Fujimoto (U.S. Patent No. 6,166,832) and Barry et al. (U.S. Patent No. 5,517,332) as applied to claim 1 above, and further in view of Applicant's admitted prior art.

Regarding claim 10, both Sawase et al. and Fujimoto further show a lens (106 and 27, respectively) and a lamp (143 and 25, respectively) as claimed. None of Sawase et al., Fujimoto and Barry et al. shows a light filter in the light path between the lens and the imaging sensor of the sensor array as claimed. However, employing a light filter such as an infra-red (IR) filter to block out IR rays and mounting of such a filter in the module are not novel features as discussed on page 6, lines 5-11 of Applicant's specification. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a filter such as an IR filter in the image module of Sawase et al. in view of Fujimoto and Barry et al. to block IR rays as is known in the art in order to produce better image signals at the output of the sensor array.

6. In response to Applicant's arguments about claims 1 and 16 and their dependent claims that the claimed image module provides accurate lateral positioning of the image sensor array in a simple manner that does not require an operator to align positioning

pins with small holes as the module and method of Sawase et al. do. However, features of the argued "lateral positioning" of the image sensor array are not claimed, and the claims do not prevent the inclusion of use of an element such as the pin of Sawase et al. since the open-end "comprising" is used in each of independent claims 1 and 16.

7. Claims 20 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 5-9, 11-15, 18, and 19 are allowed.

9. The following is an examiner's statement of reasons for allowance:

Claims 5, 18, and 19 have been rewritten in independent form including all of the limitations of the base claim and the intervening claims. Claims 6-9 depend upon claim 5.

Reasons of allowance for claims 5, 11-15, 18 and 19 were given in the previous Office action dated March 11, 2004. The reasons are repeated below.

Claim 5 is allowable because in the closes prior art Sawase et al., the back and front surfaces of the sensor board (103) have already been interpreted to have a rearward edge and a forward edge for the purpose of rejecting claim 3. The combination of claim 5 limitation and claim 3 limitation is not met by Sawase et al.,

alone or in combination with other references of record, including Fujimoto and Barry et al. Claims 6-9 depend upon claim 5.

Claim 11 recites limitations including the limitations of claim 5 discussed above. More specifically, the sensor board has a forward edge and a rearward edge, the rearward edge being abutted by the spring clip to urge the forward edge against the datum element, a front surface and a back surface. These limitations in combination with other limitations of claim 11 are not taught by the prior art references. Claims 12-15 depend upon claim 11.

Claim 18 is allowable because none of Sawase et al., Fujimoto and Barry et al. discloses enclosing a resilient seal between the imaging sensor array and the bottom cover. The bottom plate (202) of Sawase et al. is directly contacting the bottom surface of the sensor board.

Claim 19 is allowable because Sawase et al. does not disclose an element that reads on the claimed reference element, which is substantially perpendicular to the datum element (as interpreted in the discussions of claims 1 and 16) and thus does not disclose urging a second edge of the imaging sensor array against the reference element as claimed.

New claims 20 and 21, which depend upon claims 1 and 16, respectively, require that the "second direction" be a direction that is "substantially perpendicular to the first direction". The bias element (102a) of Sawase et al. is urging the sensor array (105) on the sensor board (103) against the datum elements in a direction substantially parallel to the first direction (the vertical direction from the document A to the sensor array 105

in Fig. 1 of Sawase et al.), and not in a direction that is substantially perpendicular to the first direction as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheukfan Lee whose telephone number is (703) 305-4867. The examiner can normally be reached on 9:30 a.m. to 6:00 p.m., Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (703) 305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cheukfan Lee
Aug. 17, 2004

Cheukfan Lee